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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,570	05/29/2001	Shinobu Ozeki	109663	3660

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EXAMINER	
POON, KING Y	
ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/865,570	OZEKI ET AL.	
	Examiner	Art Unit	
	King Y. Poon	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 6, 8, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu et al (US 5,872,869).

Regarding claims 1 & 8, Shimizu et al. teach a multifunction system comprising: an image output unit (printer 600) that has an optical signal input unit capable of receiving an optical signal, and outputs an image according to an optical signal inputted from the image signal input unit (figure 1 & column 3:lines41-47, printer 600 receives optical signal transmitted from the image information generating unit 1 and prints the image); a first functional unit (reader unit 500) that has a first optical signal output unit capable of outputting an optical signal and outputs the optical signal according to a first function through the first optical signal output unit (figure 1 & column 3:lines 34-40, reader unit 500 outputs an optical signal to the image information generating unit 1. column 3:lines 41-47, optical signals are further sent to the printer 600 for printing); a second functional unit (figure 1, image forming generating unit 1) that has a second optical signal output unit capable of outputting an optical signal and an optical signal input unit capable of receiving an optical signal, and outputs an optical signal according to a second function through the second optical signal output unit, and receives an

optical signal inputted through the second optical signal input unit (figure 1 & column 3, lines 22-47, image information generating unit 1 performs reception, storage and transmission of signals. Unit 1 receives optical signal from reader 500 and outputs optical signal to printer 600), and a distribution-type optical signal transmission medium to which the image signal input unit, the first optical signal output unit, the second optical signal output unit, and the optical signal input unit are connected and which distributes an optical signal outputted from at least the first optical signal output unit to the image signal input unit and the optical signal input unit, and transmits an optical signal outputted from the second optical signal output unit to the image signal input unit (figure 1 & column 3 lines 22-53, optical signal transmission medium is accomplished through optical fiber cables that network unit 1, unit 500, unit 600 and other similar systems).

Regarding claim 2, Shimizu et al, teach the multifunction system according to claim 1, wherein the first optical signal output unit and the second optical signal output unit include a unit that generates plural optical signals of different types, and the image signal input unit and the optical signal input unit include an extraction part that extracts an optical signal of a specific type from inputted optical signals (column 6, lines 38-45, image information generating unit 1 transmits and receives/extracts both optical control signals and optical image signals using optical fibers 701, 702, 703 & 704).

Regarding claim 6, Shimizu et al, teach the multifunction system according to claim 2, further comprising: an arbitrating pad that arbitrates the respective communications of the image output unit, the first functional unit, and the second

functional unit by specifying the types of optical signals to be outputted by the first optical signal output unit and the second optical signal output unit, and the types of optical signals to be extracted by the image signal input unit and the optical signal input unit (column 6, lines 38-45, image information generating unit 1 transmits and receives/extracts control signals and image signals using optical fibers 701, 702, 703 & 704, furthermore, column 5:lines 32-39, signal lines 136 and 139 connect the CPU circuit block 10 to the optical fiber interface 70 for enabling the control information for input and output signals).

Regarding claim 9, Shimizu et al., teach the multifunction system according to claim 1, further comprising: a third functional unit having a third optical signal output unit, the third optical signal output unit outputting an optical signal according to a third function to the distribution-type optical signal transmission medium, wherein the first functional unit outputs an optical signal to the image output unit through the first optical signal output unit, and the third functional unit transmits an optical signal to the second functional unit through the third optical signal output unit (figure 1 & column 3 lines 22-53, optical signal transmission medium is accomplished through optical fiber cables that network unit 1, unit 500, unit 600 and other similar systems, which constitute the third functional unit).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 4, 5, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. (US 5,872,869) & Hirota et al. (US 5,822,475).

Regarding claim 4, Shimizu et al., teach the multifunction system according to claim 2, but do not teach wherein the plural optical signals of different types are optical signals with different wavelengths.

However, Hirota et al., teach signals of different wavelengths that are transmitted in the optical transmission system (column 3, lines 57-61, transmitting and receiving a plurality of optical signals is accomplished by discriminating them by the wavelength of each signal beam).

Accordingly, it would have been obvious to one skilled in the ad to have used the wavelength discrimination transmission system of Hirota et al., in the multifunction system of Shimizu et a!., because it allows greater control of transmission without the need for a plurality of signal beam propagation layers.

Regarding claim 5, Shimizu et al, teach the multifunction system according to claim 2, but do not teach wherein the plural optical signals of different types are optical signals with different timings of output to the distribution-type optical signal transmission medium.

However, Horita et al., teach a optical transmission system that assigns timing for input and output of optical signals (column 7:line 67-column 8, line 8, timing is used for transmission and receiving each signal).

Accordingly, it would have been obvious to one skilled in the art at the time of the invention to have used the output timing taught by Horita et al., with the multifunction system of Shimizu et al., because it allows greater control of optical signal transmission in the system.

Regarding claim 7, Shimizu et al., teach the multifunction system according to claim 1, but do not teach the system wherein the distribution-type optical transmission medium comprises a diffusion pad that diffuses an inputted optical signal. However, Hirota et al., teaches an optical transmission medium comprising a diffusion part (column 6:lines 8-24, diffusion occurs within optical transmission layer 21).

Accordingly, it would have been obvious to one skilled in the ad at the time of the invention to have used the diffusion/distribution part taught by Hirota et al., with the multifunction system of Shimizu et al., because (column 3, lines 1-12, Hirota et al.) the optical diffusion portions or optical diffusers diffuse and propagate input signal beams, allowing a signal beam input from a certain signal beam input/output portion to transmit to any other signal beam input/output portion without fail even when there are temperature variations. Also, the number of circuit boards optically connected to the optical bus in the signal beam input/output portions can be changed to a value equal to or less than the maximum number of the signal beam input/output portions, thereby making it possible to construct a system which is resistant to environmental changes and extensible.

5. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (US 5,872,869) and Atlas (US 6,295148).

Regarding claim 3, Shimizu et al. teach the multifunction system according to claim 2, but do not teach wherein the plural optical signals of different types are optical signals with different intensity levels.

However, Atlas teaches an optical network for transmitting signals based on intensity levels (column 8, lines 9-12).

Accordingly, it would have been obvious to one skilled in the art to have used the intensity level discrimination transmission system of Atlas in the multifunction system of Shimizu et al., because it allows greater control of signal transmission.

Response to Arguments

6. Applicant's arguments filed 2/25/2005 have been fully considered but they are not persuasive.

With respect to applicant's argument that the Shimizu does not teach the image information generating unit, the reader and the printer communicates with each other via optical signals; has been considered.

In reply: Column 3,lines 46-55, clearly teaches the reader, the printer and image information generating unit communicates with other similar system (if a system that is missing a reader, a printer or an image information generating unit, the system would not be considered as similar) through optical connections. Furthermore, column 17,

lines 54-67, column 18, lines 1-10, fig. 11A, 11B, 11C and their description in the specification clearly indicates, the reader unit of system 1 (using 700 of fig. 2 of system 1) would be able to supply optical signal to the information generating unit 1 and printer 600 of system 2 (received through 700 of fig. 2 of system 2) and the information generating unit 1 of system 2 (using 700 of fig. 2 of system 2) would be able to supply optical signals to the information generating unit 1 and printer 600 of other similar systems including system 1. Therefore, although the reader, the printer and image information generating unit do not communicate with each other through optical connection within the same system, the reader, the printer and image information generating unit of different systems do indeed communicate with each other through optical connections. The claim is claiming a multifunctional system which is equivalent to the system shown in fig. 1 of Shimizu and includes many different similar systems of fig. 2 that communicates with each other through optical connections.

7. **THIS ACTION IS** MADE **FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is 571-272-7440. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 17, 2005

KING Y. POON
PRIMARY EXAMINER